conditions of the atmospheric trap would be established, and as now a great deal of heat from the sun would be for a time imprisoned in and near the earth's crust, and so made to do the work which renders our planet habitable.

All the movements which affect the earth's atmosphere, which constantly mix the good and the bad air, bringing refreshment to plant and animal alike, are due to this peculiar fact just above noted, viz, that the heat does not get out as easily as it comes in, and therefore, warms the earth's surface, which communicates that warmth to the lower levels of the air. The method in which this heated lower level of air creates atmospheric currents is simple. The operation is due to the fact that

HEATED AIR EXPANDS.

The reader is familiar with the fact that hot air rushes upward through a chimney, and if the chimney be tall the energy thus developed is very great. He is probably also familiar with the fact that a balloon moves upward if it be filled with heated air. We can, therefore, imagine that this warm air, next the earth's surface, seeks naturally to

FIG. 3—Showing the formation of cloud banners on the Matterhorn.

rise, but it is overlaid and held down by a layer of cooler air of vastly greater thickness than the warm stratum. The thickness of the layer warmed by contact with the earth may be accounted as a mile or less, while the overlying layer (but slightly or not at all affected by this heating process) is some scores of miles thick. It is this inertia of the overlying air which causes the heated atmosphere of the summer time to lie next the earth's surface, while directly up above at the height of two miles or so, the vapor in the clouds is in the frozen state.

There are several ways by which the hot air next the surface works upward, and in the main the movements of the wind are determined by these modes of upward escape. Under the tropics, where the sun acts with most energy, where from year's end to year's end the mean temperature does not fall below 70 degrees of Fahrenheit, the land and sea are alike greatly heated, and there is a steadfast upstreaming of air from the earth's surface to a great height. The warm air tends to rise because of its warmth; the cooler air, to the north and south of the equatorial belt tends to flow in, because, being cooler, it is heavier. The result is that there is an upward movement, which, save where it is interrupted by local influences, exists beneath the equator round about the world. Attaining a given height, this air of the equatorial belt flows off to the north and south, and so the great circulatory movement of the earth's atmosphere, that of the trade winds, is originated. Fig. 1.

TRADE WINDS.

Although these trade winds do not produce what we term storms, but rather serve

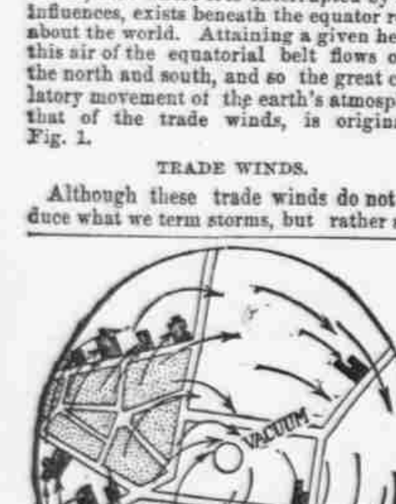

FIG. 4—Plan of a village, showing the action of a cyclone cone 1,000 feet in diameter. The arrows indicate the directions from which the storm attacks the buildings.

to prevent the occurrence of such temporary disturbances of the atmosphere, they have a great influence on the movement of violent perturbations of the air over more than one-half of the surface of the earth. It is, therefore, necessary to note certain features of their movement.

But for the rotation of the earth on its axis, the air which flows down along the surface of the earth to the equatorial belt and that which flows away to the upper region of the atmosphere toward the poles, would move along the meridians straight toward the south in the descent toward the equator and directly toward the north in the return current through the upper atmosphere: but as the earth turns around once in 24 hours, these currents are compelled to turn to the right in their journeying, the current along the surface blowing from the northeast in the region north of the equator and from the southeast in the part of the world south of that line. The upper current has a contrary motion. In the northern hemisphere it moves from the southwest toward the northeast, and in the southern hemisphere from the northwest toward the southeast. Near the tropics these movements are vigorous; but as we go away from that belt, they become less and less energetic, until in about

FIG. 5—From an instantaneous photograph, showing the overturning power exerted on the periphery of the cyclone.

the parallels of 40° North and South latitude they die away, and are replaced by the variable winds which mark all the higher latitudes of the earth's surface.

The trade winds which flow along the surface of the earth, owing to their friction on that surface, do not attain any great speed—rarely exceed 20 miles an hour. The upper current which moves obliquely toward the poles not being hindered by the friction of the surface attains a far higher velocity, often flowing with a speed of 40 miles or more. As we shall see hereafter, this upcurrent operates to propel local storms in particular directions across the surface of the continents or seas.

ORIGIN OF STORMS.

Meteorologists have recognized the fact that the greater number of storms, if not all, originate in essentially the same fashion as do the movements which create the trade winds, that is they are due to the greater heat of the air next the earth's surface and to the fact that this air occasionally escapes upward from the surface of the earth into the higher realms. The reader may readily make himself acquainted with this process by observations which he can make in the summer season at almost any point on the earth's surface. When the summer sun pours its rays upon the earth's surface in the longer days of the year, that surface becomes greatly heated. In a period of calm weather and bright sunshine, we can often see the air next the ground set a boiling by the swift tide of heat which the earth pours off into it. For the depth of a few hundred feet, the temperature may rise to 90° or more, though at the height of 10,000 feet the air may be as cold as zero. This lower lying heated air seeks to get upward through the overlying colder layer and now and then bores a hole through it, forming a channel of escape. Any little accident of the surface may determine the point at which this heated air, tending upward like a balloon, forces its way through the cold air which presses down upon it. A tall tree or chimney may make an updraft and create a point of escape.—Fig. 2. As soon as the air begins to move upward, we perceive that it takes on a whirling motion, which at first involves a column only a few feet in diameter; but under favorable circumstances it may extend this diameter until the whirlwind has a width of 50 feet or more, a great amount of air then rushing from every side to find its way upward through the new won path of escape. In this manner the familiar dust whirls of our open plains and streets are formed. They continue until all the patch of locally heated air, which occupies a given field, is drained away into the upper levels of the atmosphere, and so the overlying cooler air is allowed to settle down upon the surface. Waterspouts on the seas are due essentially to the same cause as the

WHIRLWINDS ON THE LAND.

The air next the surface of the ocean, especially in regions where the sea is warm, as in the tropics or in higher latitudes over the surface of the Gulf Stream, is, on account of its warmth, struggling to find a way upward through the overlying cooler air. When the wind is blowing as in the district of the trades the atmosphere is constantly rolling over and over, and so the heated air has a chance to escape from the surface of the sea; but in calms this relief is not afforded, and so we have exactly the phenomena of the small, upward setting streams which make our dust whirls, only they are on a larger scale. The greater size of the streams is due to the fact that the ocean, being a great plain, a larger amount of air is heated than on the irregular surface of the land. Sometimes the whirlwinds which produce the waterspouts are strong enough to lift the surface of the water in the form of spray or upward-bounding waves to the height of a score of feet above the sea-level. The dark cloud of the waterspout is not produced as is commonly supposed by the drawing down of the clouds, or the upward making of the water, but in a totally different manner, viz.: The warm air that sets upward in the spiral column is very moist. As it rises above the sea level it expands and becomes cooler by that process. As soon as it is cooled the moisture enters into the state of mist and so becomes the dark column which is a conspicuous feature in all waterspouts.

Those who are familiar with high mountains have often had a chance to observe how the warm, translucent air of the valleys driven against the steep mountain side, and by its slope carried to a higher level, generates a sheet of cloud which sometimes hangs like a banner about the peak. Figure 3—Passing the summit of the moisture-laden air, being heavier than the atmosphere about the height, quickly falls again toward the plain. As it descends it again becomes warmer, and the mist returns to the state of unseen vapor.

MOUNTAIN CURRENTS.

It is not only in high mountains that we may observe this interesting phenomenon, but even with hills not more than 500 feet in height it may sometimes be seen, especially after heavy rains, when the air is saturated with moisture. Something of the same sort may, in rainy seasons, be observed in our forests where the warm air beneath the boughs escapes through occasional gaps in the foliage and moves upward on the principle of the dust whirl. This uprising air is translucent as long as it remains in the wood, but it quickly becomes a mist as it escapes into the cooler region above.

The most peculiar feature in our ordinary dust whirls consists in the rotary movement of the column. At first sight this spinning action appears very mysterious; but a little observation convinces us that the type of motion is one which is necessarily assumed in particles of a fluid or gaseous nature which seek to make their escape through a narrow orifice. If the reader will observe the flow of water from any basin, such as a bathtub, through the opening in the bottom, he will perceive that the particles of water whirl about in their downward course in a manner precisely comparable to the whirling action of the air when it flies upward through the rift it has formed in the overlying colder part of the atmosphere. In a less distinct way he will note that the water escaping from the nozzle of a fire engine hose is apt to take on the whirling movement which causes the hose pipe to twist about so that the strength of several men is required to hold it in proper position. With these observations in mind, he may then readily proceed to the explanation of the spiral form assumed by the ascending air. Taking a bit of paper, let him draw a circle to show the space occupied by the vent through which the fluid or gas escapes; then let him draw a number of lines radiating from the center of that circle which will represent the paths along which the particles tend to move as they come in towards the central path which

THEY ARE TO FOLLOW.

Now, if every particle of air or water could travel on perfectly straight lines, the movement might take place without any twisting of the current; but if the wind is a little stronger on one side of the column than the other, or if in any other way a particle of air is turned aside from its straight path, it will then as it moves toward the center with a constantly accelerating velocity press a little on one side of the center of the column. A column of this sort, be it the descending stream of water in a basin or the ascending current of air in the atmosphere, is swayed in its course with the utmost ease. A little more pressure on one side than on the other will cause it to turn about toward the side where the pressure is greatest. As soon as it begins to turn, then all the other particles of air are diverted in the same direction from the normal course, applying their pressure to accelerate the speed of the column. The faster that column whirls, the more energy every particle applies to promote the spinning action. Therefore the faster it spins the faster it is made to spin. The process is an accumulating one which may lead the whirling to almost inconceivably great velocities. Although in the little sand whirl the rotary motion is of no great effect, for at most these trifling storms lift small objects or push the straws aside, the process in the great whirls of tornadoes, which we are about to describe, being carried out on a far larger scale comes to have a great importance with reference to man.

THE AWFUL TORNADO.

Having studied the sand whirls the student may then proceed to consider the methods of movement in the far greater

FIG. 6—From an instantaneous photograph of a cyclone 20 miles off, traveling away from the spectator. Note the relative size of the buildings in the foreground and the cone 20 miles off.

spinnings which constitute the devastating tornadoes which afflict a large part of the United States. At certain seasons of the year it often happens that the layer of heated hair next the earth's surface, over a large area, attains to a considerable thickness, two or three thousand feet or more, and is immediately overlaid by a very cold stratum. Under these circumstances, the mass of air tending to move upward through the overlying cold layer is vastly greater in amount than in our summer dust whirls. In this case the phenomenon of the dust whirl is repeated on a far larger scale. To this heated air is generally, if not invariably, due the movements of the greater storms, those movements which bring our blizzards, and other autumnal and winter storms, that sweep across the northern part of North America. These great whirls, the origin of which we have yet to consider, press before them on their south-eastern side a mass of warm air, which slips along in advance of the storm, entering like a wedge between the surface of the earth and the cold air of the upper atmosphere. When this heated mass is imposed on the surface it is apt to strain upward and break through the overlying layer of heavier air, and produce a vaster type of whirl, in all respects

FIG. 7—The path of the cyclone, showing the narrowness of the path of this storm and the comparative immunity of some of the trees.

except size, like the dust whirls. In place of the ascending column of a width of at most of 10 or 20 feet as in the dust whirl, it may have a diameter of from 1,000 to 10,000 feet.—Fig. 4. In place of draining away the air over a few acres of surface, it may give upward passage to the heated atmosphere from an area of ten square miles or more. Owing to the greater diameter of the column, and the greater distance to which the air journeys toward the path of upward escape the speed of the movement is vastly enhanced, and its duration made proportionately greater. In the first stages of its movement

THE UPWARD RUSH

of the tornado commonly involves the air at the height of some thousand feet above the surface, but the ascending column speedily extends downward until it touches the surface of the ground. Toward the spout, up which the air is streaming, the particles of the atmosphere pour from a distance of miles with a constantly accelerating velocity. As they whirl in toward the center their speed becomes so great as to tear away all movable objects from the surface of the earth.—Fig. 5. The swift spinning of the air causes it to fly away from the center of the whirl; just as in the basin the descending water by its motion forms a hollow cone reaching downward into the orifice of the vessel, so in the whirling of the air-spout is a space almost empty of air extending upward from the ground. Into this vacuity any movable objects may be sucked and lifted far above the surface of the earth, until, by the irregular movement of the columns, they are cast outward, and allowed to fall upon the earth.

Among the most conspicuous features of our tornadoes is the vast mass of whirling cloud which forms high in the air about the top of the ascending column. This tumult of the clouds is produced in the main by the rapid condensation of the vapor in the air, which has been sucked upward. Owing to its heat the air next the surface retains its moisture in the form of invisible vapor, much as in the steam boiler the steam remains transparent on account of the high temperature to which it is exposed, so in the lower heated atmosphere the moisture does not affect the transparency of the air. When, however, the air ascends, expands, and thereby rapidly cools, its contained water passes swiftly into the form of clouds, which roll away in the tumultous winds formed about the top of the spiral.—Fig. 6.

SOME CURIOUS FEATURES.

Among the many curious features of these tornadoes, we note their continuous movement in an easterly direction from the point where they are first formed. This movement is to be explained by the action of counter trades at a few thousand feet above the surface; in the countries where these tornadoes are formed, the air is almost always in rapid motion toward the east or northeast. Thus the vent through the colder upper air, into which the ascending column escapes is constantly carried across the surface in an easterly direction. We can readily imagine that if the opening in a basin, for instance, in a bath tub, could be drawn across the floor of the vessel, the descending spout of water would follow it in its movement. In a similar manner the passage which is followed by the ascending air moving off to the eastward, the dependent spout is dragged away in the same direction, often curving backward in the direction whence it came, like the string of a kite. In this order it moves across the surface at the rate of from 20 to 40 miles an hour, carrying utter ruin in its path. Fig. 7.

In the tropical regions, where for months the sea is heated by a nearly vertical sun, a great thickness of hot and moist air accumulates over the surface, and, precisely as in the tornado, breaks upward to the upper atmosphere. Owing to the fact that the thickness of the heated air is greater, and the field it covers wider, these cyclones of the sea are of vastly greater area, and of longer continuance, than those of the land. They often march slowly over the ocean surface, enduring, it may be for weeks, until their movement, dependent on the motion of the upper air currents, carries them beyond the field which affords the conditions of their maintenance.

THE OCEANIC CYCLONE.

The oceanic cyclone or hurricane has its magnitude and violence increased by a curious process. As can be well imagined, the lower heated air over the sea is extremely moist, though transparent. A vast amount of energy has been employed to evaporate this water contained in the air. As the air goes upward through the great ascending column of the hurricane the moisture condenses into the form of cloud, whence it falls in rain. The energy which held the moisture in the shape of vapor is thus set free, and acts still more rapidly to elevate the ascending column. In a certain limited sense, we may say that the tropical cyclone is a great steam engine, the sun being the fire, the ocean the boiler and the atmosphere the rest of the mechanism.

We have next to consider a class of whirlwinds which gives the swift marching storms that pass so frequently across the surface of our continent. These, in the circumstances of their movements, are essentially like the oceanic cyclones, but their actions are less explicable than those of the tornado or the hurricane. In fact, the better understood storms, those of the blizzard type, exhibit an ascending column, with a layer of air pouring in from every direction towards it. In the center of the storm, as is shown by the signal-service maps, there is a low barometer marking the upward set of an atmospheric column, many scores of miles in diameter. The difficulty with the theory of these storms is found in the fact that they occur in seasons when the surface of the earth is not warmed to a high temperature. Nevertheless, even when the earth's surface has a temperature of zero, the difference between the heat of the air next the ground and that at the height of five miles may well be as much as 100° F. Thus it is likely that, even in winter, we have a sufficient tendency of the superficial air to rise, as it does in an ordinary chimney, and so to produce the cyclonic movement. The peculiar violence of these storms of the blizzard type is probably due to the wide differences in the temperature in diverse parts of the continent in the winter season.

VARIATIONS IN TEMPERATURE.

In the summer we rarely have a variation in the average daily temperature in the different parts of the United States amounting to as much as 50°, while in the winter the range between the northwestern region and the Atlantic coast not infrequently amounts to twice as much. The reader has already seen that all our air movements depend on differences of temperature, and he may readily imagine that in the season when the local differences are greatest, the energy of the movements will be most considerable. Moreover, in the winter season the temperature of the Atlantic coast is relatively warmer than that of the land, so that the air of that region tends upward, while that of the interior of the continent being at a lower temperature is not equally affected. The swift march of the blizzard across the continent and to the eastward over the ocean is accounted for, as is the movement of the tornado, by the eastward set of the upper current of the counter trades.

The movements of the atmosphere are thus in the main to be explained by the warmth of the earth's surface, and the irregular distribution of this heat in different regions, together with the tendency of the ascending air to assume the spiral motion. Although the winds which are thus caused are frequently harmful to life, the effect of the circulation is, on the whole, most beneficent. Were the air destitute of motion all the stratum next the surface of the earth would soon be rendered unfit for life by the processes of life itself. It is only by the constant stirring which the storms bring about, that the materials of the atmosphere are constantly mingled together, and so kept in a condition to maintain the operations of animals and plants.

A FAMOUS FESTIVAL.

How Whitsunday is Observed in England and Other Countries.

A RELIC OF A PAGAN HOLIDAY.

Morris Dancer Kemp's Remarkable Feat and Adventures.

OLDEN MIRACLE PLAYS AND MYSTERIES

[WRITTEN FOR THE DISPATCH.]

To-day, June 9, is Whit Sunday, a festival of high importance in the Episcopal, Roman Catholic and Lutheran churches, and a day which, among the peasantry of Great Britain, Ireland and the Continent of Europe, is as generally and joyously celebrated and is as rich in quaint folk-lore, peculiar customs, sports, superstitions, legends and traditions as any other day—be it fast or festival—in the whole 12 months. In the calendar of the churches above named it is proclaimed the greatest of all the festivals, except Christmas and Easter. Not only is it a Christian festival, but it is a Hebrew one as well, the event which it commemorates in the Christian church having occurred on the Hebrew day of Pentecost. That event was the descent of the Holy Ghost on the Apostles when "they were all with one accord in one place," after the ascension of our Lord, on which occasion they received the gift of tongues or different languages that they might impart the gospel to foreign nations.

Among the ancient Hebrews the day of Pentecost was a species of harvest home. It was calculated from the second day of the Passover, the 16th of Nisan. The Hebrew law prescribed that a reckoning should be kept from the morrow after the Sabbath to the morrow after the completion of the seventh week, which would, of course, be the fiftieth day after the Passover. These fifty days included the period of the Hebrew grain harvest, which commenced with the first sheaf of the barley harvest gathered at the Passover and ended with the making, on the day of Pentecost, of two loaves of leavened bread from the finest wheat flour of the new crop. Thus we see in the Whit Sunday of the Christian church another instance of the substitution of a Christain for a Hebrew festival, as in the case of replacing the Hebrew Passover with

THE CHRISTIAN EASTER.

Yet, as is the case with many of the holy days of the Christian Church, it is generally thought by antiquarians that our Whitsuntide was also identified with one of the great summer festivals of the Pagans of Western Europe.

Among the English peasantry from the earliest Christian times down to the present day, the most elaborate folk ceremonies of the whole year have been performed on Whit Sunday. Among the most notable of these is what is called the Whitsun-ale. Ale was so universal a drink among the early English that by its association with various festivities it has added more than one new word to our language—notably "bridal," a corruption of "bride-ale," which was a term applied to ale of a peculiar quality and strength, specially brewed in honor of the bride at a wedding. The ale used at Whitsuntide, or the Whitsun-ale, was remarkable for its strength, and was consumed at an assemblage of the whole parish, usually held in some barn near the church. The ale was dispensed to those present by the church wardens, and the profits arising from its sale were devoted to a fund for the repair of the church. Two persons, previously chosen, were designated as lord and

LADY OF THE ALE,

a sort of throne was provided for them at one end of the barn and they were attended by their steward, sword-bearer and other officials. The persons filling these offices were frequently paid small sums for their services, and in the old Church Wardens' accounts in the English parish churches there frequently occurs such entries as "Payd to her that was Lady of the Ale at Whitsuntide, by consent, 5s."

But of the old English sports of Whitsuntide the greatest favorite was the Morris dance. This is believed to have been derived from Spain through the Moors, and its name is regarded as a corruption of the Spanish Morisco, a Moor. Originally danced by five performers, it at length became customary to have it performed either by a single individual or as many as cared to participate in it. There was finally grafted on to it some features of an old English country dance performed at certain periods in honor of Robin Hood and his outlaws, and from this circumstance a female participating in it was called a "Maid Marian," after one of Robin Hood's sweethearts. One of the most distinctive features of the Morris dance was a pair of garters hung with bells and worn by each of the dancers.

In 1599 William Kemp, a celebrated comedian of the reign of Queen Elizabeth, danced the Morris all the way from London to Norwich. This feat at the time of its performance was considered one of the most remarkable ever attempted. Kemp published a most interesting and curious pamphlet, giving a full account of his adventures en route, and his wonderful exploit continued to be a theme of popular allusion for many years afterward. All along the way the country people turned out to greet the dancer in such crowds that at times it was with great difficulty he could make his way through them. He was entertained by the nobility and gentry during his progress, and on his arrival at Norwich was publicly received by the Mayor with great honor.

A STURDY MAID MARIAN.

One of the most amusing passages in Kemp's curious book—one of the rarest and most valuable in my collection of folk lore—is where he tells how a sturdy butcher undertook to dance with him from Sudbury to Bury, but gave out exhausted before they had danced half a mile. He then goes on to say: "As he and I were parting, a lusty country lasse being among the people, cal'd him faint-hearted lout, saying: 'If I had begun to daunce, I would have heldout one myle, though it had cost my life.' At which words many laughed. 'Nay,' saith she, 'if the dauncer will lend me a leash of his belles I'll venter to treade one myle with him myselfe.' I lookt upon her, saw mirth in her eies, heard boldness in her words and beheld her ready to tucke up her russat petticoate; I fitted her with bels, which she, merrily taking, garnisht her thicke, short legs, and, with a smooth brow, bade the tabrer begin. The drum strucke, forward marcht I with my merry mayde Marian, who shooke her fat sides and footed it merrily to Melford, being a long myle. There parting with her (besides her skin full of drinke), an English crowne to buy more drinke; for, good wench, she was in a piteous heate; my kindness she requited with dropping some dozen of short courtesies, and bidding God blesse the dauncer, I bade her adiue, and, to give her her due, she had a good eare, daunst truly, and we parted friends."

Dancing of almost any kind is said to be among the healthiest and most conducive to longevity of all occupations, but Morris dancing would seem entitled to the palm in these respects if we are to believe a pamphlet printed during the reign of James I., which states that the united ages of ten retired Morris dancers then living in Herefordshire amounted to 1,200 years, while of eight others the youngest was 79 and the oldest 109 years, their united ages being 800 years. Morris dancing continued a favorite Whitsuntide diversion in England down to the early years of the present century, and was publicly danced in Goswell street road, London, as late as 1826.

WHITSUNTIDE MYSTERIES.

Down to the middle of the seventeenth century the representation of "mysteries" and "miracle plays" always took place at Whitsuntide throughout Great Britain and in many countries of Continental Europe. They were dramatic spectacles devised during the dark ages—when the Bible was an interdicted book—to instruct the people in sacred story. The "mysteries" represented the narratives of the Old and New Testaments, while the "miracle plays" delineated the lives of the saints. Originally written and acted by monks, they continued a favorite Whitsuntide diversion for nearly two centuries after the reformation, for though they were strongly condemned by some churchmen—among them Wickliffe and his followers—as a profane treatment of sacred subjects, yet Luther gave them his sanction, saying that "such spectacles often do more good and produce more impression than sermons."

These religious dramas were usually performed in churches, though frequently in cemeteries, market places and public squares as well. Three stages were usually erected, one above the other. Upon the highest was a representation of the Creator and His angels, and upon the next lower of the saints, while the action of the drama took place upon the lowest.

Upon one side of the last named there was a representation of the mouth of hades, whence came fire and smoke and the cries of the lost. Demons also issued from it, their coarse jests and horseplay forming the low comedy part of the entertainment, and affording infinite amusement to the audience.

IN OTHER COUNTRIES.

It was my good fortune, while sojourning in Naples some three years ago, to participate in the elaborate Festa di Monte Virginie, which the Neapolitans annually celebrate on Whit Sunday and during the two succeeding days. The principal features of the celebration takes place at a church erected upon a mountain, near Avelino, a day's journey on foot from Naples, and the prettiest and most interesting part of the ceremony is the long train of carriages, wagons, carretas and all sorts of nondescript vehicles, gaily decorated with flowers, ribbons and garlands—as are also the horses, oxen and asses which draw them—which winds from the city along picturesque roads to the summit of the mountain, attended by great crowds of merry-makers on foot, singing and dancing untiringly, and bearing sticks which support pictures of the Madonna.

In St. Petersburg, in 1875, I witnessed what was perhaps the last observance of a Whitsuntide custom, which, though, once highly popular, had long been gradually dying out. It was a show of marriageable women and girls desirous of obtaining husbands, and took place on Whit Sunday afternoon in the "Summer Garden," a place of popular resort. The young women were attended by their parents or some other elderly relative, through, whom, if a young man were smitten with a maid, he conducted his negotiations for her hand. It is, of course, needless to say that this usage was confined to the lower and middle classes.

FRANK FERN.

FOR WOMEN READERS.

A Few Paragraphs About Fashions Picked Up for the Fair Sex.

We hear a great deal about plain skirts and the elaborate bodice, when in reality the plain skirt is a myth and a delusion unless used as a foundation for innumerable bows, loops and sash ends. Showers of ribbons fall in all sorts of odd and grotesque ways upon it. Twenty-five yards of ribbon dangling in long streamers from my lady's waist to the hem of the skirt is considered by no means elaborate. Loops of ribbon, often in two and three shades to match the tints of the gown, are started from the right shoulder seam, carried across the bodice to the left side and allowed to fall in long ends to the feet. These ribbons are also arranged in a similar way at the back and are then so placed that they fall in an opposite direction from those in front. Sash ends are permitted to wander at their own sweet will across the gown, one end falling at the front or side, and the other to be found straying far away from its mate. These have very much the appearance of a panel when allowed to fall in straight lines to the bottom of the skirt.

* * *

Fruit is now used upon the frailest and daintiest of chapeaux—the reddest and roundest of cherries., luscious bunches of grapes, tempting looking currants, rosy cheeked crab apples, dewy blackberries, and tiny branches of gooseberries, their delicate skins so naturally veined that one's thoughts rapidly travel back to that old-fashioned garden in which was once experienced such childish delight.

* * *

Many cotton gowns have a broad edge of lace fitted into the arm's eye so that it will simulate a Zouave jacket. Deep caps of lace are also arranged to fall over the top of the sleeve. Loops of ribbon falling from the wide frill of lace at the neck and reaching to the waist band give a very jaunty finish to the most matter of fact bodice.

* * *

Bonnet wires are also longer obtrusive. The newest and prettiest capotes have their framework well hidden beneath a dainty cloud of tulle net or lace.

* * *

Girls who aspire to lift their inexpensive challie gown above the commonplace must use with a prodigal hand the daintiest laces and ribbons. So treated the modest material will rise to the fascinations of the loveliest of lonely garden gowns.

* * *

Narrow ribbons have grown to be positively tiresome, and we hail with delight the broad bands that have taken their places. They are not only used upon street and house dresses, but are to be seen upon some of the most charming ball room costumes.

* * *

Mull hats are no longer confined to the small girl, but have bloomed out into most expansive shape. They are coquettish enough to suit the most frivolous of girls or sedate enough for the most dignified of matrons, and come in colors so varied that to match the oddest of costumes is by no means a difficult task.

* * *

Silk mull is just the daintiest of dainty materials for the best white gown. It is so soft and fine that it can be drawn through a finger ring.

* * *

Some of the net skirts are finished at the bottom by a broad band of velvet or ribbon. The net is then turned up over the trimming, forming a hem, and in this way protecting the velvet from constant wear. This is a French fashion which our modistes are gradually adopting.

* * *

The pattern selected for braiding or embroidery is now an artistic jumble, mathematical regularity being a thing of the past.

Satan's Diligence Teaches a Moral.

Texas Siftings.]

Mrs. M. was a remarkably charitable old lady, with a good word for everybody and toleration for every fault.

"I do think mother could even find something to say that was complimentary and pleasant about the devil," her son remarked one day to a number of young friends. "Here she comes, let us question her. Mother, by the way, what do you think of his Satanic Majesty, at his best, say?"

"Well," replied the old lady, mildly, "I think we would all do well to copy his diligence."

Agassiz's Snakes.

Recollections of Court and Society.]

That famous naturalist missed one morning three snakes he had brought home the night before. On searching high and low he found two, but one was still missing. Mrs. Agassiz (who was dressing) in putting on her boots found it coiled inside her boot.

Her screams of surprise brought Agassiz, who exclaimed: "Oh, Lizzee, how terreeble it might have been." "What," said his wife, "are these poisonous?" "Oh, yes, the most poisonous little serpents you can think—so rare—and you might have crushed the nice little thing."

SAMOAN CONFEREES.

Pen Pictures of the English, German and American Commissioners.

PRESIDENT HERBERT BISMARCK

Said to be a Worthy Son of His Shrewd and Autocratic Sire.

THIS COUNTRY WELL REPRESENTED

[CORRESPONDENCE OF THE DISPATCH.]

BERLIN, May 28.—On the south side of the Wilhelmstrasse, the most aristocratic street in Berlin, stands a plain old-fashioned two-story building. It looks very shabby from the outside, nor does it present a more attractive appearance within. The only beauty it possess lies in its vast garden containing 100-year-old trees, a very park in the center of Berlin. This garden extends for several hundred yards back to the Koniggratzerstrasse, and here Bismarck is in the habit of taking his constitutional walks, screened from the eyes of the curious public. Here also Emperor William usually halts for a quiet stroll before starting on his long rides through the Grunewald.

But the long, low building lying in front of this miniature paradise does not partake of its beauty, nor does its homely, weather-stained exterior lead the stranger to suppose that here center the wires which control the destiny of Europe to-day. But so it is, for this shabby house contains the German Foreign Office. Here are the plans laid and the intrigues initiated which keep Germany at the head of European diplomacy and power.

Entering the rickety doorway, passing up a few steps and through a gloomy hall, with whitewashed walls and carpeted with cheap matting, one ascends an old, worn stairway to the second story. Old and worn everything appears in the building. But it has none of the romance which lingers about somce anient houses. The impression one receives from it is rather that of a shabby-genteel tenement house, like those seen in the lower part of New York.

WHERE THE COMMISSION SITS.

In the second story, facing the park, is located the room in which the Samoan Conference holds its sessions. It is about 30 feet in length by about 20 feet in width. It is fitted up with the same Spartan simplicity—not to use a stronger word—as the rest of the building. The floor is innocent of carpets—a bare pine floor—the walls are painted a dirty white, a picture of the Kaiser is the only ornament. Around the walls maps of the Samoan Islands are hung. In the center stands a plain table covered with green baize; on the table lie nine black leather portfolios. Around it are grouped a dozen cheap armchairs, upholstered with tawdry red plush. At the head of the table sits Count Herbert Bismarck, at the foot the two secretaries, on either side are ranged the commissioners.

Such is the room in which the destinies of Samoa will be decided and the questions at issue between America and Germany are being discussed. It is not a very attractive spot. Has it been chosen for its very discomfort in order to drive the commissioners to a quicker decision, on the same principle by which juries are locked up in dark, dreary rooms? Who knows? Bismarck is shrewd and may make use of even trifles.

As for the men who compose the conference, do they present a more attractive picture than their surroundings? Let us see.

Count Herbert Bismarck, who acts as President of the conference, has been so frequently described that it is not worth while to reiterate the many things said about him. In appearance he much resembles his father, when the latter was in his prime. He has the manner and the tricks of speech that distinguished the great unifier of Germany. As to his mental qualities opinions differ widely. While some proclaim him the great statesman of the future, a worthy successor of his distinguished sire, others say that he possesses no originality of thought or action, that he only repeats the lessons drilled into him by the Chancellor. The truth probably lies somewhere between the two versions. While not as brilliant as his father, Count Herbert certainly bears in his countenance unmistakable traces of energy, resolute will and intelligence.

BRAIN AND TONGUE.

Next in importance comes Privy Councillor of Legation, Dr. A. Krauel. He has the appearance of a bureaucrat and a scholar. He is simple in his language and possesses but little rhetorical ability. The press reporters in the Reichstag scarcely ever pay attention to his speeches, so uninteresting is his delivery. It is only when he has finished and his opponent replies, that they discover from the quality of the latter's speech, that Dr. Krauel has said something important. Then they hurriedly get copies of his speech from the official reports. He is of medium height, dark-complexioned, with his thoughtful face framed by a full growth of black hair. Nobody would take this meek, plain-looking man to be the important factor that he really is in the Foreign Office. But his thorough knowledge of colonial affairs and international law are invaluable to the Chancellor. Only when one meets the sharp gleam of his intelligent eyes does one fully realize the mental power that lies behind. On his shoulders rests much of the real work on the German side of the conference. But whatever glory is to be earned will go of course to Count Herbert Bismarck. Such is the unvarying custom of the Foreign Office. Woe to him who aspires to be known beyond its walls. His official head will fall forthwith.

It Dr. Krauel is the brain, Privy Councillor Baron Holstein is the tongue of the German delegates, at least as far as Bismarck permits. He is the beau ideal of a man of the world and also a great sportsman. He had much rather talk of the hunt than of diplomacy. Like Krauel, he is in the prime of life, dresses well and has fine manners. His voice is melodious and pleasing, but his delivery is monotonous and one quickly tires of hearing him speak. His eyes have a kindly, tender expression. Krauel is a thinker; Holstein has the poetic temperament. His knowledge is not profound, but he gets beforehand from Krauel whatever facts are necessary. He is combative when he tells his little tale in the Reichstag; and when Richter and Bamburg, the Liberal leaders, attack him his face fires up with the desire for battle, but he keeps a discreet silence. Prince Bismarck has his subordinates well in hand and will not allow them to take his role in the debates. Holstein says during the conference only what has been carefully told him beforehand by his master.

THE BRITISH REPRESENTATIVES.

Of the British delegates, Sir Edward Malet, British Ambassador to the Court of Berlin, is the most important. He is a quiet, self-contained gentleman. At first sight he appears rather stiff in his manners, but on nearer acquaintance one finds him a most charming gentleman. He is a shrewd observer and a fine scholar. It is said that his official reports resemble the writings of Bacon in their brilliancy. He speaks German fluently, having been educated at Frankfort. He has rather a thin voice, which, in moments of excitement, however, becomes strong and resonant. His step is elastic, his eye bright and clear. A short, full beard frames his handsome face. He and Bismarck have not been friends since the attacks in the German official press on the late Emperor Frederick and his widow. Sir Edward holds Bismarck responsible for these and for the decadence in political morality lately shown in Germany.

Hon. Edward Scott, the second English Commissioner, was for a long time First Secretary of the British Legation, and is well liked at court and in society. He is now Minister to Switzerland. He has a thorough knowledge of German diplomacy, and knows a great deal about Samoa. He is a young man, slightly above medium height, somewhat inclined to embonpoint, and wears a short, full beard. He has exquisite manners.

Mr. Grant, the other English Commissioner, is the commercial attache to the British Legation at Paris. He was for many years English Consul at Leipsic and distinguished himself so much, that he was advanced to his present post. He was also delegate to the Congo Conference, held in 1885. He is persona gratissima in Berlin and his popularity among the Germans is increased by the fact that he has a German wife. He married a Fraulein von Holzendorff.

THE AMERICAN COMMISSIONERS.

Of the Commissioners who take care of American interests at the Samoa Conference, the Hon. William Walter Phelps is so widely known as to call for little attention here. His is certainly a striking figure. Tall, gaunt, yet apparently full of physical force and nervous energy, his keen face surmounted by a head of full, short-cut hair, "banged" over the forehead, he would be a remarkable person in any assemblage. That "bang," by the way, of which so much fun has been made, covers a scar that Mr. Phelps can be proud of—it is the scar of a wound received in his country's service. His eyes have a shrewd, but withal kindly, look. A short mustache covers his upper lip, while a short "goatee" adorns the chin. Mr. Phelps is a good talker, very pleasant and affable in his manner. He is a keen politician and a good diplomatist. He made a good record as American Minister at Vienna, and would no doubt prove very acceptable to the German Court in the same capacity. The knowing ones say that after the conference is over Mr. Phelps will receive the appointment to the vacant post of Minister here. He himself is silent when questioned on this subject, as, indeed, on any subject connected with his mission here. But he evades the questions put to him with so much tact and good nature that he has become a general favorite with the newspaper correspondents in this city.

Except the gray hairs sprinkled liberally through his brown hair, mustache and close-trimmed sidewhiskers, Hon. John A. Kasson, of Iowa, shows no trace of his 57 years. He is a small, alert man, with a rosy, smiling face and keen eyes. He is a confirmed bachelor, though very popular among the ladies. Always well dressed he appears to good advantage in his perfectly-fitting frock coat, dark striped trousers and well-ironed silk hat. He was much liked here while Minister during the short Garfield administration, and his appointment to the Samoa Conference was well received by the German Government.

SOME BRIGHT MEN.

George H. Bates, the gentleman whose *Century* article called forth so much comment from the press, is certainly the most distinguished-looking of the American delegates. He has a tall, graceful figure, a finely shaped head, and a handsome face. A long, pointed mustache gives a look of decision to his features, while a double eye-glass increases the aristocratic cast of his countenance. He dresses well, is very polite and agreeable in his manner, but has little to say outside of the commission. His recent experiences have probably taught him the value of diplomatic silence. His wife and son have accompanied him.

Next to the three Commissioners the most interesting person is ex-Consul Sewall, of Samoa, a native of the Hub. He is a small dapper man, with a resolute, but refined face. Owing to his warm defense of American interests, the Germans have no great liking for him, and he has, so far, not taken any part in the conference, at least, not publicly. He is a very cultured man, a typical Bostonian, and has kept rather quiet while here, being rarely seen in public.

Lieutenant Parker, of the U. S. navy, one of the secretaries of the American Commissioners, is a man of slight build, has a very bright expression, and is the possessor of a fine mustache, while Lieutenant Buckingham, also of the navy, the other secretary attached to the commission, is a quiet, gentlemanly officer, who says little, but who might say a great deal, for few are the Americans who know as much as he of the military condition of the leading European powers.

It will be thus seen that the American commission is in no respect inferior to the commissions of the two other countries. In fact, I have heard more than one shrewd and impartial observer remark: "Those Yankees are a strong body and pull together excellently. Look out for them!"

THEODORE STANTON.

WOMEN AS CUSTOM INSPECTORS.

Their Impudence in Ransacking the Luggage of Ladies.

I saw a woman inspector this morning, says Joe Howard in the Boston *Globe*, after a passenger had opened her trunk, she having declared under oath that there was nothing dutiable in it, and having told previously what there was in it, turn the contents topsy-turvy, down-side-up, and leave them in a condition of mixedness which was simply outrageous. She asked questions about this, and questions about that, and questions about the other, which the passenger answered with marvelous patience. There was an indefinable sneer on the inspector's lip, a horrible suggestion of "I don't believe you" in every look, in every gesture, in all she did, and when she had ended her utterly unnecessary and fruitless task she turned on her heel, leaving the passenger, an elderly woman, fragile, disconcerted, as upset as her things were physically, to rearrange as best she could her little wardrobe, and fasten, lock and strap the trunk, with her own hands.

That women smuggle is simply an assertion that human nature is the same in both sexes. That smugglers ought to be detected, in the common weal, we all recognize. That women should be searched by women, and not by men, common decency exacts, but I am not talking about searching suspected smugglers, and I am talking about women inspectors on the open piers overhauling and needlessly disturbing the luggage of ladies, who have made affidavits as to the contents of their trunks, and who should be known at once, and would be known at once by a man inspector, to be precisely as they appeared, and to be truthful in their statements. I would not put my own observation forward as an argument unindorsed, but as the frequent experience of ladies who are travelers tallies with my observation this morning, and as the record of women inspectors is absolutely impeachable, I think the sooner we do away with that line of industry for our dearly beloved sisters the better.

A VALUABLE EAR OF CORN.

A Place Where Theft is Promptly and Severely Punished.

From the London Figaro.]

A report from the Governor of Yunnan shows the barbarism that still lingers in some of the country districts of that province. The villagers have a horrible custom of burning to death any man caught stealing corn or fruit in the fields. A man named Peng Chao-sheng was going down to watch his own field, and on the way he plucked an ear of corn from a neighbor's patch of maize. He was seized and brought before a village assembly, which decided that he must be burnt to death, though his mother tried to ransom him by the offer of her whole property. The unfortunate man was burnt alive, his own mother being compelled to set fire to the faggots, so as to prevent her lodging a complaint afterward, which, however, turned out an unsuccessful precaution. Of the two ringleaders of the outrage one has died in prison and the other has been decapitated. The incident shows the excessive poverty in which the people must live, for it would be impossible that such a custom should exist except in a country where every ear of corn was as valuable as a man's life.

More Practical Than She.

New York Herald.]

She (romantic)—Oh, how beautifully significant those Indian names are! Alabama, for instance, "Here let us rest."

He (unromantic, but determined to go her one better)—Yes, and there's—er—Monongahela, "Here let us drink!"

A pause follows.